

Request for Applications (RFA): Hypertension Prevention and Control in low- and middle-income countries (LMICs)

Background

Hypertension is a major contributor to the growing global pandemic of cardiovascular disease and stroke. Poor control rates for hypertension and a lack of strategies to maintain normal blood pressure, particularly in LMICs, reflect the challenges of effective and affordable implementation in health care and other systems.

To help address these issues, the Medical Research Council seeks research project proposals which will emphasize implementation science in Low- and Middle-Income Countries (LMICs) [1]. The focus should be on existing approaches to prevention and control of hypertension rather than the development of new treatments.

This request for applications is issued under the auspices of the Global Alliance for Chronic Diseases (GACD). Members of the GACD include the UK Medical Research Council, the South African Medical Research Council, the Australian National Health and Medical Research Council, the Canadian Institutes of Health Research, the National Heart, Lung and Blood Institute of the National Institutes of Health in the United States; the Indian Council for Medical Research and the Chinese Academy of Medical Sciences.

Principles

The following principles of the GACD are reflected in this RFA:

- Committed to improving health gains while reducing health disparities in LMICs.
- Focused on research topics where the need for evidence to inform policy, programmes, and practice is most urgent.
- Pursuing knowledge translation and exchange approaches that are designed to maximize the public health benefits of research findings.
- Identifying common approaches for implementation, integration, and scaling-up within different health service delivery systems.
- It is expected that learning from individual projects will provide evidence that will support local decision-making. Cumulative learning across funded projects is expected to provide a basis for evidence-informed recommendations for national and international organisations.

The GACD members will encourage research from a variety of settings in LMICs.

Objectives and remit

The overall aims of this programme are:

- to develop a better understanding of key barriers and facilitators at local and national levels that affect hypertension control and to consider how implementation challenges can be overcome;
- to understand how innovations for hypertension control can be introduced and scaled-up across a range of settings;

- to identify what elements of systems most need to be strengthened to prevent hypertension and its consequences (e.g. stroke);
- to improve hypertension control rates while reducing disparities in hypertension control across population sub-groups.

This RFA is designed to optimize cumulative learning across individual projects, and to ensure that results are interpretable and generalisable across locations. These include standard metrics and/or protocols for examining outcomes and for assessing features of the health care system and the broader context. The development of these standard metrics and/or protocols will be undertaken in consultation with national and international investigators, decision-makers and policy-makers. Funded teams will be asked to come together as a consortium to develop approaches to standardize data collection and wherever feasible will be expected to use these standardized approaches in their respective projects. This will allow the sharing of outcome data across projects. A Standards and Technical advisory group will be established for this RFA.

There are expected to be important differences across the settings of funded study teams. These differences include variations in: social, economic and cultural contexts; population health disparities and disease burdens; health care delivery models including the mix of formal and informal health care providers; financing models for chronic disease prevention and control; private and NGO sector engagement in chronic disease; and regulatory structures. These differences will provide an important basis for programmatic learning about the implementation and scale-up of hypertension prevention and control programmes.

Purpose and criteria for the GACD RFA

The long-term goal is for the results of projects supported by this announcement to provide healthcare providers and decision-makers with the scientific evidence to implement effective programs that will:

1. reduce the prevalence of cardiovascular disease (heart disease and stroke) developing as a consequence of high blood pressure
2. inform implementation and enable scale-up of larger programs (including related policies in health and other sectors) at local, national and regional levels

Broader outcomes

Broader outcomes expected from this RFA across participating countries include:

- Establishment of networks of teams involved in implementation research for chronic disease prevention and management;
- Advances in the field of implementation science with applicability to other settings and other health issues;
- Common protocols for implementation science initiatives developed and refined, including protocols for systems analysis;
- Strengthened capacity for implementation research in chronic disease; and,
- A prototype for the international peer review of implementation research on chronic disease in LMICs.

Scientific priorities

Research projects should include a focus on one or more of the four components that are crucial for the prevention and control of high blood pressure, namely prevention, awareness, treatment and maintenance:

1. Prevention of high blood pressure by addressing lifestyle and environmental risk factors through multi-strategy and multi-level initiatives;
2. Identification of individuals with high blood pressure;
3. Initiation of treatment for individuals with high blood pressure with proven lifestyle and pharmacological interventions;
4. Sustaining treatment and self-care management of high blood pressure, incorporating additional interventions until the treatment goals are achieved.

Applications should give consideration to:

- system barriers (health systems, and broader economic and social systems) to hypertension prevention and/or control and how these can be addressed;
- how decision-makers and other knowledge users will be engaged in the project;
- an implementation research component involving some strategies with demonstrated efficacy and/or effectiveness; the proposals may also include the development of new strategies;
- an assessment, where relevant and appropriate, of equity and gender gaps in blood pressure prevention and control;
- the multidisciplinary composition of research teams;
- an appropriate plan for knowledge translation and exchange.

Proposals

Programmes proposed can be new or linked to existing programmes. Innovative approaches, including those that draw on successful local experience and those that lend themselves to adaptation to other environments, will be encouraged through this funding mechanism. Examples of innovative approaches include the use of electronic and cellular information and communication technologies, the involvement of industry and non-governmental organizations in health or other sectors, the participation of community workers and community leaders.

Applications in response to this announcement may utilize a variety of approaches such as experimental and quasi-experimental study designs, mixed methods studies, comparative case studies, economic and mathematical modelling, and combined approaches. Examples of relevant proposals include:

- Implementation of an intervention programme targeting environmental supports and policies that make healthy eating an easier choice. This might include:
 - accurate identification of modifiable intervention targets, and system-level barriers and capacity.

- policy analysis in health and other sectors and working with food regulators and businesses to examine the evidence base for existing policies
- monitoring compliance with policies and using feedback to improve policy compliance.
- Implementation of a comprehensive screening and high blood pressure control program, which:
 - Engages local decision-makers and community leaders from the beginning and describes their role on the project.
 - Involves multiple-stakeholders from a variety of sectors (e.g. food industry, agriculture, transportation) and various disciplines (e.g. engineering, economics, agriculture, nursing, medicine, public health).
 - Is community-based and integrated with programmes to manage other diseases.
 - Examines the resource implications of the programme and how the programme impacts on the delivery of local health care services for other patient populations.

Ineligible studies

Given the implementation focus of this RFA, the following types of studies will not be considered for funding:

- Replication effectiveness studies
- Clinical trials testing the efficacy or effectiveness of new or established pharmacological agents (or combination of agents) which have wider effects than those relating to hypertension alone.

Review criteria

Relevance and quality of project:

- Proposal fits well within the objectives and scientific remit set out in the call
- Strong scientific rationale for pursuing the questions or gaps in knowledge that are being addressed. Success is likely to lead to significant new understanding that is relevant for scientists and knowledge users. Applicants are aware of complementary research underway elsewhere.
- Proposed methods are appropriate and feasible to answer the study question(s) and are competitive with the best in the field.
- Proposal is innovative (applicants may want to refer to the [document on integrated innovation](#) [2])

Quality of team

- Team members have established a high quality track record relevant to this field of research.
- Demonstrated engagement of decision-makers.

Implementation plans

- Major scientific, technical or organisational challenges been identified, and realistic plans to tackle these are outlined.
- Proposed intervention strategies are relevant to the social, cultural and economic context.
- Inequities and equity gaps including gender have been taken into account in the design of an implementation strategy.

Potential impact

- Project is likely to contribute, directly or indirectly, to relieving the burden of chronic disease, and in particular to improving blood pressure control.
- Objective measures of evaluation have been included. Programmes which are able to track long-term clinical outcomes, such as incidence of stroke, are strongly encouraged.
- The potential for scaling-up intervention strategies in the local environment has been considered. For example, applicants could address affordability for users and their financial implications for implementing organisations and funders.
- Training and implementation science capacity-building components have been incorporated where appropriate.

(1) The definition of Low- and middle-income countries follows the World Bank Atlas method definitions by which economies are divided into income groups according to 2009 GNI per capita: Low income countries, \$995 or less; lower middle income countries, \$996 – \$3,945; upper middle income, \$3,946 – \$12,195. See also <http://data.worldbank.org/about/country-classifications>

(2) “Integrated innovation” is the coordinated application of scientific/technological, social and business innovation to develop solutions to complex challenges. This approach does not discount the singular benefits of each of these types of innovation alone, but rather highlights the powerful synergies that can be realized by aligning all three to address a single challenge.